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No. 82

Subject: USDA Post-War Study, "Demand for Farm Products Depends upon the City."

Field Distribution: War Board members, Extension Editors, AAA Committeemen, BAE Analysts, FDA Marketing Reports Chiefs, FCA, FSA, SCS Regional Information Chiefs, Post-War Planning list.

Suggested Use: Background information: educational work, including speakers; discussions by local groups. To provide answers for requests for facts about interdependence of farm and city.

After this war, will we again have -----

Price-depressing surpluses of farm commodities?

A "back-to-the-farm" movement of unemployed?

Farm mortgage foreclosure sales and penny auctions?

Another "Grapes of Wrath" trek of dispossessed farm people in a heart-breaking quest for too few jobs?

A million farm families on relief and WPA?

Country schools closing down for lack of funds to pay teachers and keep up the buildings?

The dumping of milk trucks in a desperate effort to force prices up?

Of course, we don't want any of those things to happen again.

Every farmer wants to be free to produce all he can---and conserve and build up, not destroy, his soil in the process.

He wants to have a market for all he produces over and above his family's needs.

He wants fair prices.

He wants to feel pride in his ability to produce, to provide well for his family, to give his children a good education, to safeguard his own and his family's health, to take part in the affairs of his church and community.

For the farmer to prosper, there must be a continuously high demand for farm products.

What is necessary to maintain high demand after the war?

The Committee on Post-War Programs for the Department of Agriculture has made a study based on this question. The study, No 3 in the series on post-war plans, is called "Demand for Farm Products Depends Upon the City".

A copy is attached. It's for you to read and think about, and to refer to when you're talking things over with farmers and among yourselves.



MAINTAINING DEMAND FOR FARM PRODUCTS

DEMAND FOR FARM PRODUCTS DEPENDS UPON THE CITY

To help win the war is the first concern of every one on the home front. At the same time, it is necessary to look ahead and plan for the future. That is true in war as in peace. Thus, in the midst of war, plans must be made ready for the Nation's shift back to peace, when the war ends. As basis for one important aspect of such planning this publication explores in some detail the interdependence of farm and city, and the ways in which farm prosperity is dependent upon continued full employment in cities here and in countries abroad. It attempts to set forth the conditions in the city that make for a continuously high demand for farm products, and to show what farmers can do to help provide those conditions after the war.

Farmers have long known that city people were dependent on them. Farmers grow the foods the city people eat, and farmers buy many of the goods produced in the city. When farmers are selling their products at good prices, and farm incomes are high, farmers buy large quantities in town and by mail. Sale of goods and automobiles and farm machinery, in turn, makes markets for city products and helps keep city industries busy.

Of course, generally speaking, farmers are just as dependent upon the city as the city is upon them. Farmers and rural areas together have provided less than one-fifth of the national market for goods and services during recent years, whereas more than three-quarters of all farm products consumed in this country are bought by nonfarm consumers. After World War I, there was a long period - from 1923 to 1929 - when city activity and employment boomed. Yet many farmers were going bankrupt because of falling foreign markets and the deflation following the war-time boom in land values. When city industry collapsed after 1929, farmers went into an even deeper depression. Although neither farmers nor city industries can get along

without each other, farmers are even more dependent on city buying power than is city industry on farm buying power.

Farmers can see the effect on them of changing city activity in the relations of city income and farm income. When the number of people at work in the city goes up or down, the prices of farm products tend to follow. This is because farm production is fairly constant as a whole, whereas farm prices are less constant. Farmers are even more acutely aware of these changes in prices than of changes in income.

A more fundamental relationship than this, however, is that between the income of city workers and the income of farmers. Attention shall be turned first, therefore, to the relationship between city income and farm income. Next, the relationship between industrial activity and the consumption of farm products, will be discussed, and evidence shown that farmers prosper when the wheels of industry are turning rapidly. Third, it will be shown that the demand for farm products is greatest when city people are fully employed. Finally, the close relationship between high process and heavy demand for farm products by city people will be pointed out.

Food Expenditures Vary With City Income

The more money city people make, the more they spend for food. Retail sales of meats and dairy products follow almost exactly the changes in the income of city workers (prior to the war).

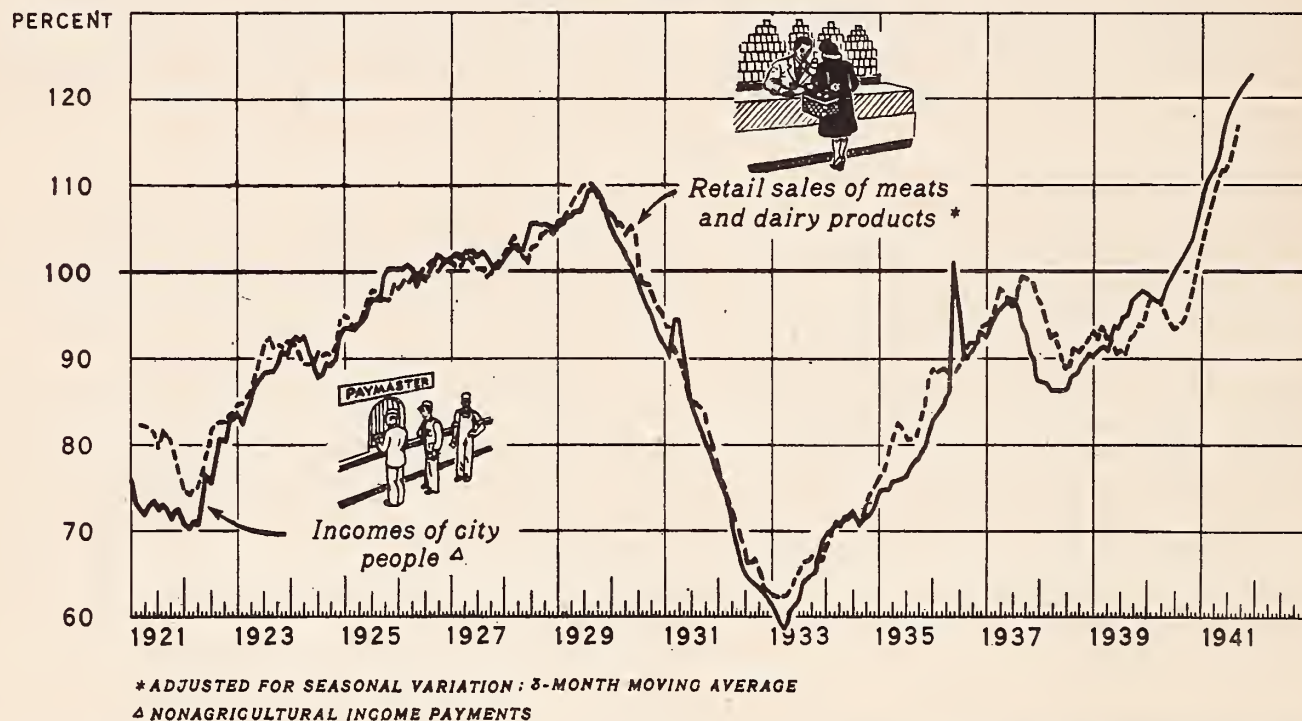
(In figure 1, the dotted line represents the changes in retail sales; the solid line represents the changes in city incomes.)

not necessarily follow that if city income were to go up \$200 that the sale of farm products would go up \$100. Sales and income do not move *exactly* together.

When people are very hard up, they cut down on purchases of other things somewhat more than they cut down on food purchases. When they become prosperous, they buy more and better food, but they also add other things to their standard of living—radios and automobiles, new furniture, vacation trips. As a result,

INCOMES OF CITY PEOPLE, AND RETAIL SALES OF MEATS AND DAIRY PRODUCTS, UNITED STATES, 1921-41

INDEX NUMBERS (1924-29=100)



U. S. DEPARTMENT OF AGRICULTURE

FIGURE 1

NEG. 39780 AGRICULTURAL ADJUSTMENT ADMINISTRATION

This relation also holds true for fruits and vegetables, and for other crops and livestock products produced primarily for sale in the domestic market.

Farmers get their income ultimately out of the retail sales of farm products. The more sales there are the more money there is for the farmer. Therefore, since demand for farm products (retail sales) moves up and down with the income of city people, the income of farmers is tied to the income of city people.

Now suppose that city income goes up \$100 and that, as a result, the sale of farm products goes up \$50. It would

consumers' expenditures on food do not go down quite as fast in hard times, nor go up quite so far in good times, as do their incomes. (Looking at figure 1 again, this is shown by the fact that the solid line dips further and goes up higher than the dotted line.)

Farm Products Which City Income Most Affects

The close relationship between city income and farm income holds true not only in these general terms, but also for specific farm products. The relationship is closest for crops, livestock, and livestock products used almost

entirely in the United States, as shown in the upper and middle section of figure 2.

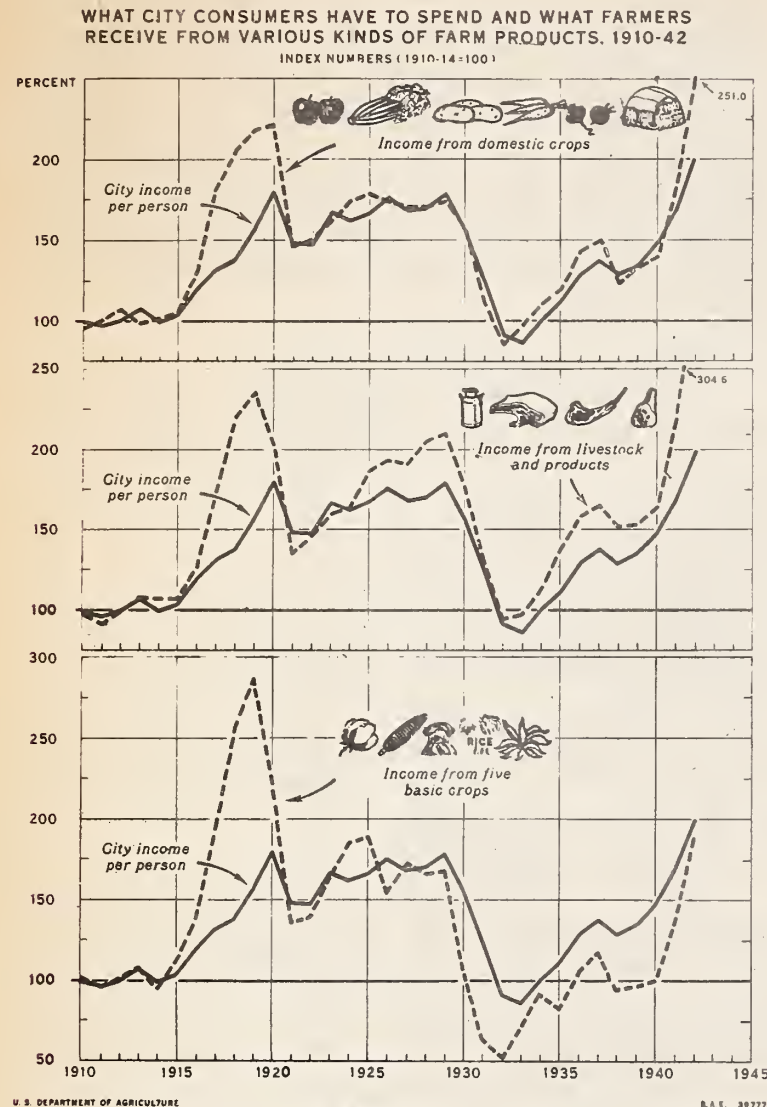


FIGURE 2

Of other crops like cotton, wheat, and tobacco, large parts go for export. These crops are therefore affected by supply and demand conditions abroad, as well as in this country. And even for these export crops, farm income follows the general movements of city buying power in this country. With the shrinkage of export markets in the past 15 years, however, income from these export crops has been relatively lower than from other crops and has not kept up with city buying power, as shown in the bottom section of figure 2.

City Prosperity Affects Farm Products Differently

The relationship between city income and the demand for specific farm products may be put another way. Suppose that a city family which earned \$1,250 last year is earning \$3,500 this year. Perhaps the

head of the family got a raise, or his wife went to work too, or one or more of his children got jobs. The family's increased income would certainly increase its demand for farm products. Figure 3 shows the farm products for which this family would expand purchases this year, and how much more it would buy for each group. With very many incomes increasing there has been an exceptionally large increase in civilian demand for these farm products. This caused large retail price increases and made rationing necessary. Figure 3 is based on data as to how families with different incomes actually do spend their money.

WHEN INCOME RISES, CITY FAMILIES EAT MORE
(QUANTITIES OF FOOD BOUGHT BY A \$3,500 FAMILY, SHOWN AS PERCENTAGES OF AMOUNTS BOUGHT BY A \$1,250 FAMILY)

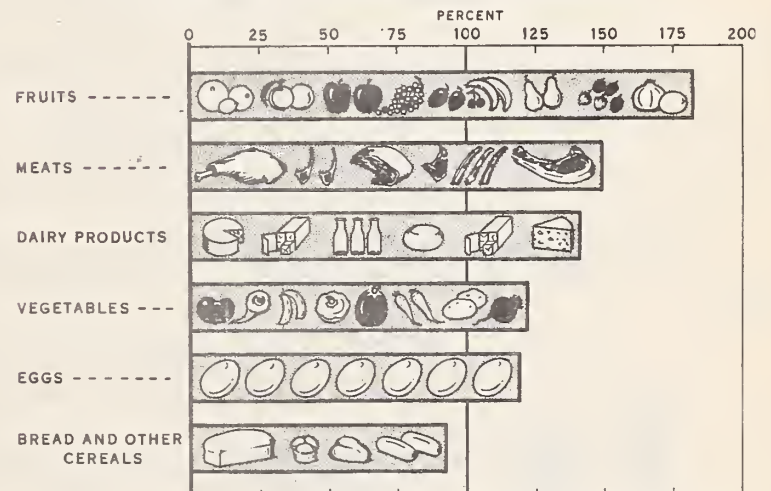


FIGURE 3

A city family with a \$3,500 income eats a great deal more of most foods than does a family with a \$1,250 income. The biggest increase occurs in fruits. Meats and dairy products come next, then vegetables and eggs. Bread and other cereals show little if any increase. This does not mean that fruit farmers would be able to sell more than 175 percent more than they sold before, nor would the livestock farmers be able to sell about 150 percent of what he sold before. On the contrary, the first effect of the increased demand for fruit and meat would be to raise prices of those products. This direct relationship between farm income and city income was explained in figure 1. After a time, as fruit, dairy, and livestock farmers increased their production in response to the higher prices, consumers would be able to buy approximately the additional quantities shown on the chart.

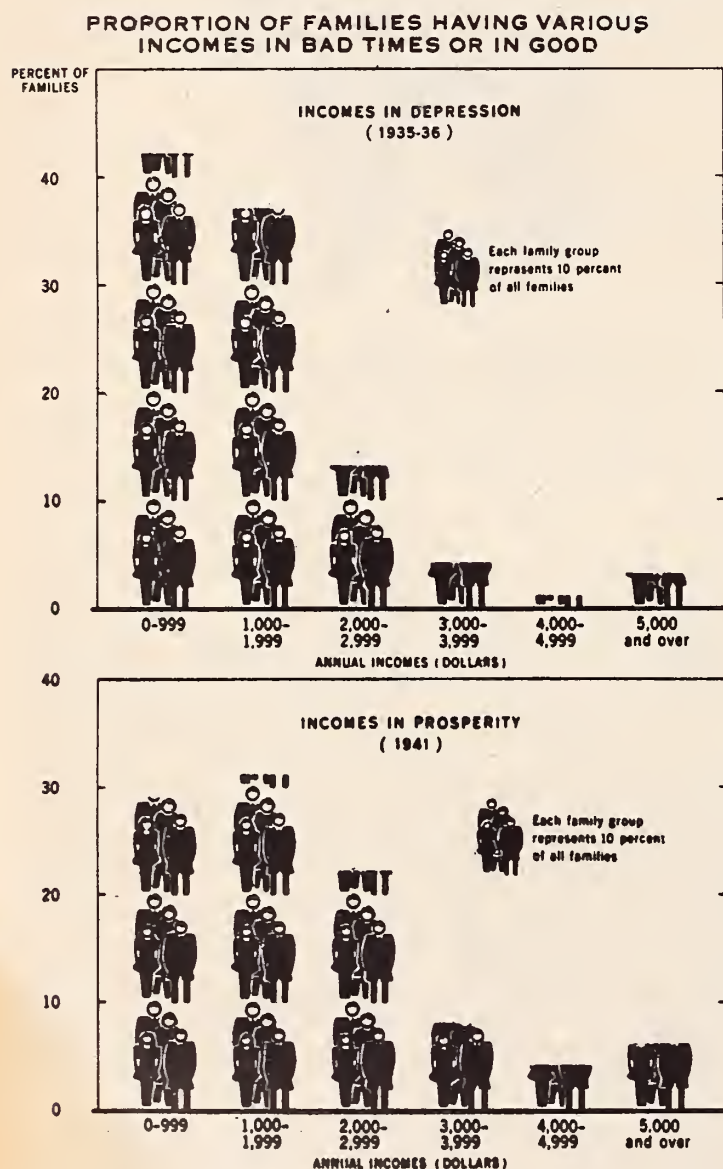
Studies of human nutrition and vitamins and experiments with varying diets, disclose many things about the foods people need. These studies show that most low-income families do not get nearly enough milk and other dairy products, green and leafy vegetables, or tomatoes and citrus fruits. Apparently the things people *want* to have more of when they have more money to spend are about the same things the nutritionists think they ought to buy to be stronger and healthier.

Prosperous Times Raise Family Incomes

When business activity and employment increase, many families move up from the low-incomes to the more well-to-do groups. The way which changing business activity affects the incomes of families is shown in figure 4. In

1935-36, when the country was still suffering from the great depression, the average income was low and most families had low incomes. (Note the upper part of figure 4). At that time more than 40 percent of all families in the Nation had incomes of less than \$1,000 more than 35 percent had incomes of between \$1,000 and \$2,000. Nearly 80 percent of all families had less than \$2,000 a year to spend.

When business conditions improved, however, there were fewer poor families and a greater number of well-to-do families. Thus, in 1941 (see lower part of figure 4) the proportion of families with incomes of less than \$1,000 as well as that with incomes between \$1,000 and \$2,000, were much lower than in 1935-36. The proportion of families with incomes of \$2,000 or more increased from one-fifth in 1935-36 to two-fifths by 1941.



That families with larger incomes spend more for food than do families with lower incomes has already been shown (figure 3). The shift of families from the income groups of under \$2,000 to the groups receiving more than \$2,000 per year, which occurred between 1935-36 and 1941, brought with it a substantial increase in food expenditures. Individual families, which before did not have enough income to feed their families properly, began to earn enough money to buy meats and fruits and dairy products and other protective foods. These foods, more expensive than bread and potatoes, also produce improvements in nutrition.

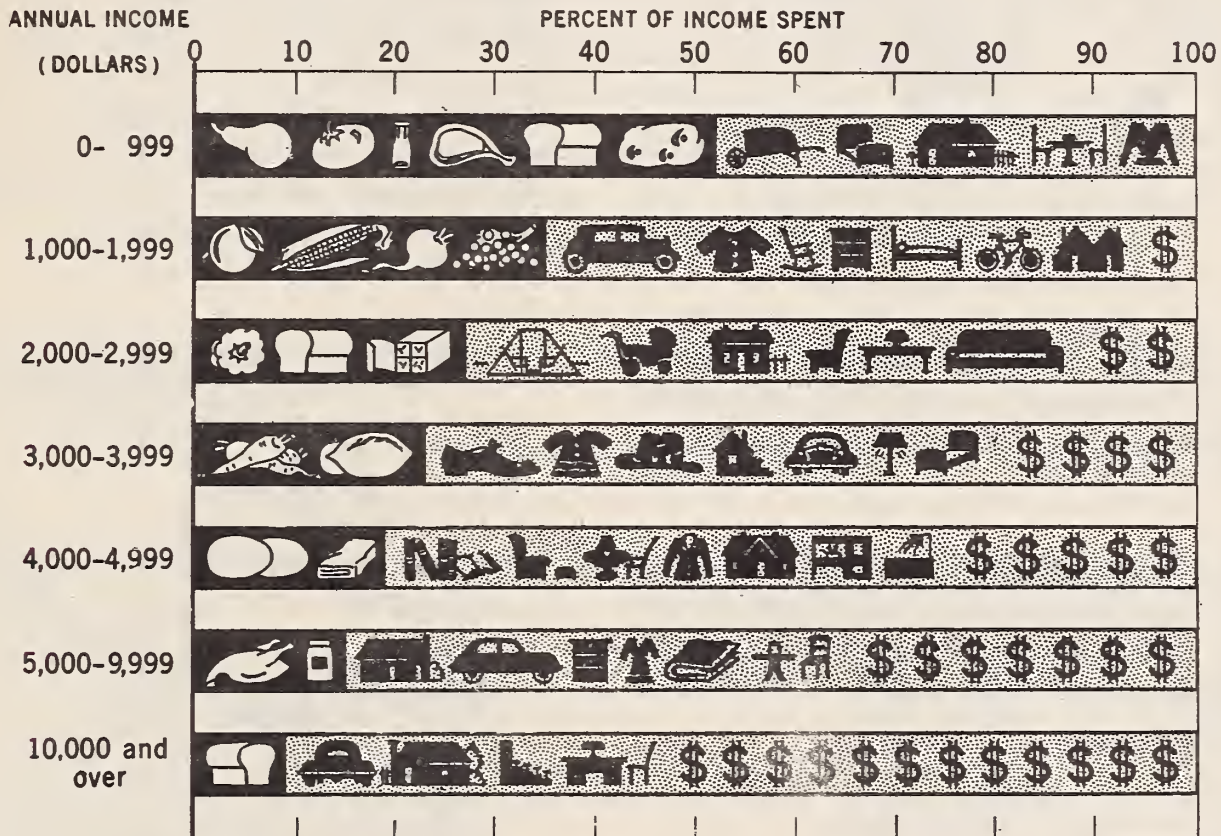
The increase in income from 1935 to 1941 was most marked among families that previously had low incomes. This increase brought about a material increase in expenditures for food, as families with low and moderate income spend a larger part of their incomes for food than do high-income families. (Note figure 5.) Families with incomes below \$2,000 spend one-third or more of their income on food, whereas

families with incomes of \$5,000 or more spend one-sixth of their incomes, or less, for food purchases. When the Nation's increased income goes largely to low income families, much of the increase is spent for food. On the other hand, if a large portion of the increase in income goes to families with the higher incomes, a much smaller proportional increase would be reflected in the

Demand for Farm Products Closely Related to Business Activity

The second city condition which affects the demand for farm products is the level of industrial production. Consider cotton, for example. Cotton spinnings have followed business trends closely, especially since 1934.

PERCENTAGE OF INCOME SPENT FOR FOOD AND OTHER THINGS BY FAMILIES HAVING VARIOUS INCOMES, 1935-36



U. S. DEPARTMENT OF AGRICULTURE

FIGURE 5

B. A. E. 42938

food demand. This point is important to farmers. If a high level of business activity were reflected mainly in big profits, and so increased the very large incomes, this rise in national income would have little effect upon the demand for farm products. But a high level of business activity which increases salaries and wages of workers, bringing higher incomes to families that previously had very low incomes, results in a marked increase in the amount of money spent in the grocery store. The big increase in demand for farm products which has occurred in 1942 and 1943 and the general rise in wartime income of city workers, offers striking evidence of this fact.

In past periods, cotton consumption has been influenced by the supplies of cotton available, as well as by business activity. In 1923 and 1924, low cotton supplies and high cotton prices cut cotton consumption below the level of business activity. After the big cotton crop and low price of 1926, cotton consumption in 1927 went far above the level of industrial activity. Since 1934, A.A.A. programs and the ever-normal granary have narrowed the swings in cotton prices, and have kept ample supplies available for domestic consumption. As a result, cotton consumption since then has gone up and down much with general business activity more closely than before.

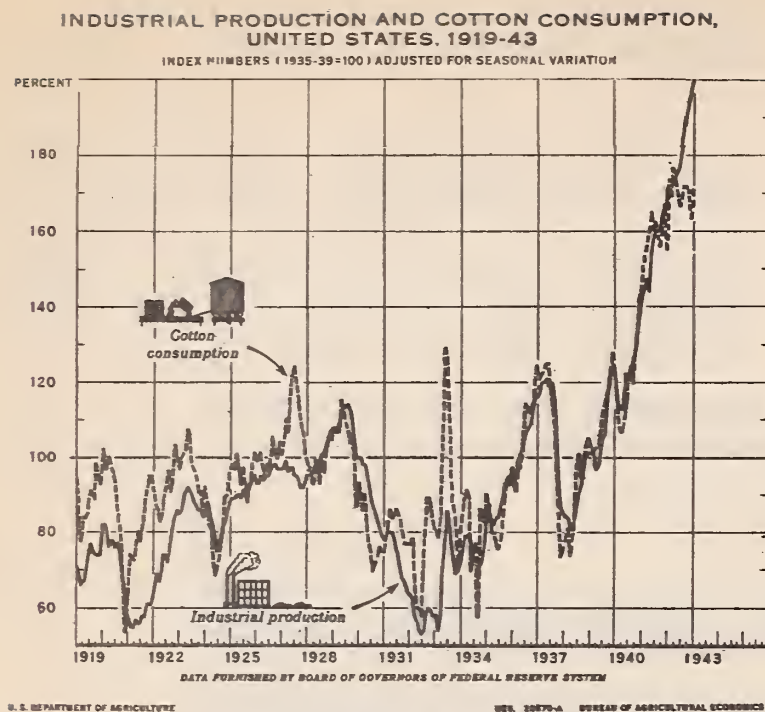


FIGURE 6

Wool consumption, like that of cotton, reflect changes in general business activity and in the buying power of consumers.

Large supplies of raw textile materials ordinarily are available for city use. The quantities manufactured each year increase or decline with the level of business activity.

Business Activity Influences Imports and Exports

Business activity affects the demand for farm products because it also affects the amount of goods we buy from other countries. When factories are booming, the Nation uses much tin, rubber, coffee, tea, silk and many other products, except when war cuts off such imports. When factories close down, imports fall off. The upper part of figure 7 shows that the quantity of goods imported from abroad in peacetime has followed closely the volume of industrial production in this country.

The dollars the Nation spends for imports (and on foreign travel and other services) determine how much money other

countries can spend in buying things here. There has been a long-time downward trend in the exports of farm products, however, as our own population has increased. But although export demand shifted from farm products to other things, farmers still gained through the effect of industrial exports on domestic employment. Detroit factory workers that are kept busy making automobiles for shipment to Argentina or England make a better market for American milk, meat, and cotton than the best foreign markets. From 1930 to 1940, with growing nationalism and trade barriers in other countries, the downward trend in farm product exports was particularly marked, as is shown in the lower section of figure 7.

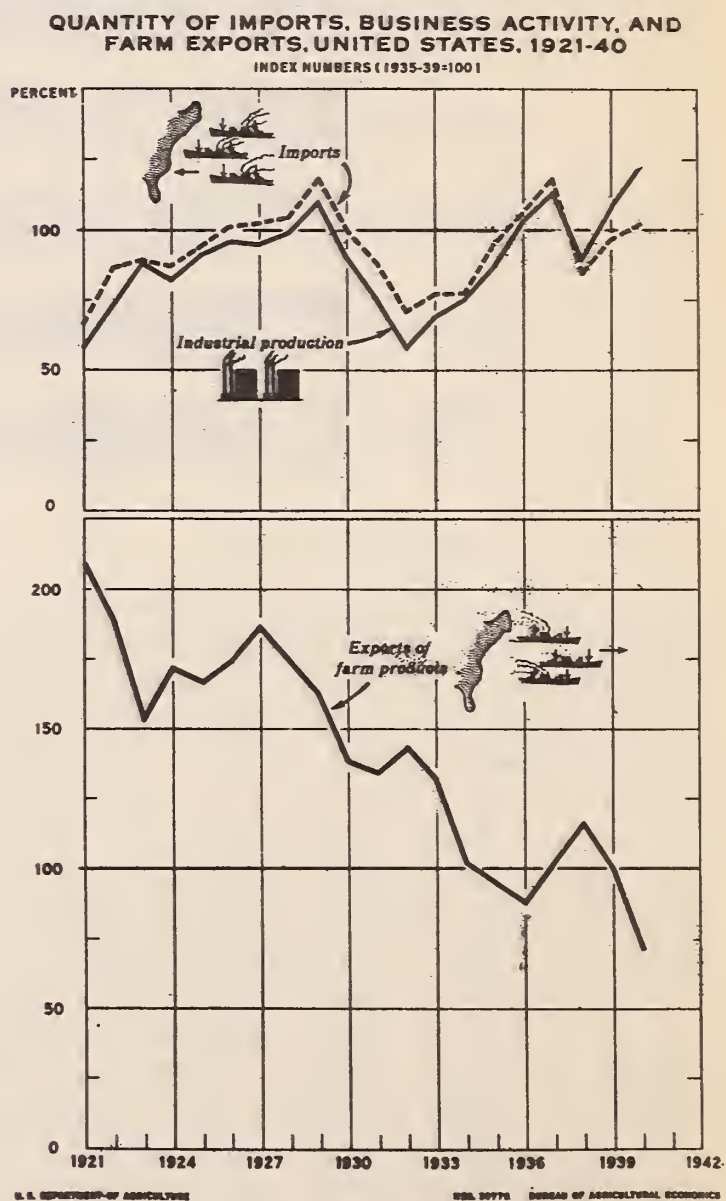


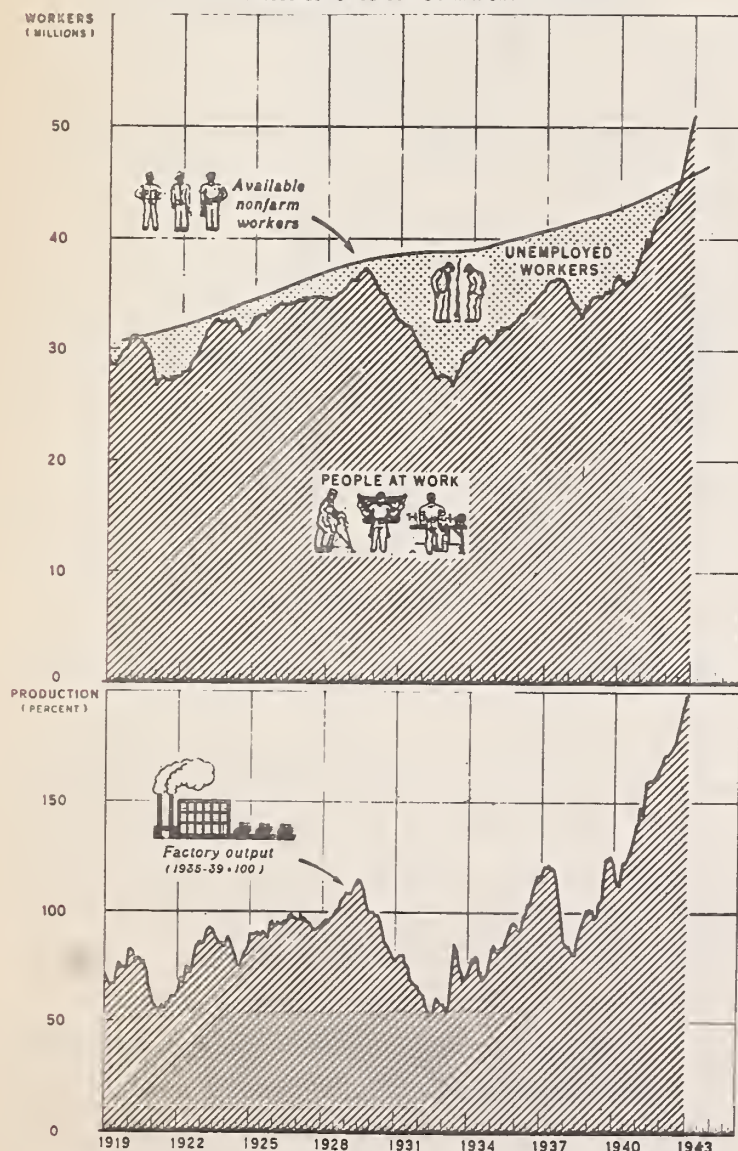
FIGURE 7

City Buying Power Changes With Level of Employment

The third city condition which affects demand for farm products is the level of employment. When business activity is high nearly everybody has a job, wages are good, and pay envelopes are full. When factories close down, workers are laid off, pay rolls drop, and consumers have less money to spend. When consumers' incomes decline, as has been shown, the demand for farm products falls off.

In figure 8 the light area of the upper portion shows the number of city people in this country that were unemployed during most of the last 10 years until war activity began to raise the level of employment.

INDUSTRIAL PRODUCTION, AND INDUSTRIAL EMPLOYMENT AND UNEMPLOYMENT UNITED STATES, 1919-43
(ADJUSTED FOR SEASONAL VARIATION)



U. S. DEPARTMENT OF AGRICULTURE

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BUREAU OF AGRICULTURAL ECONOMICS

FIGURE 8

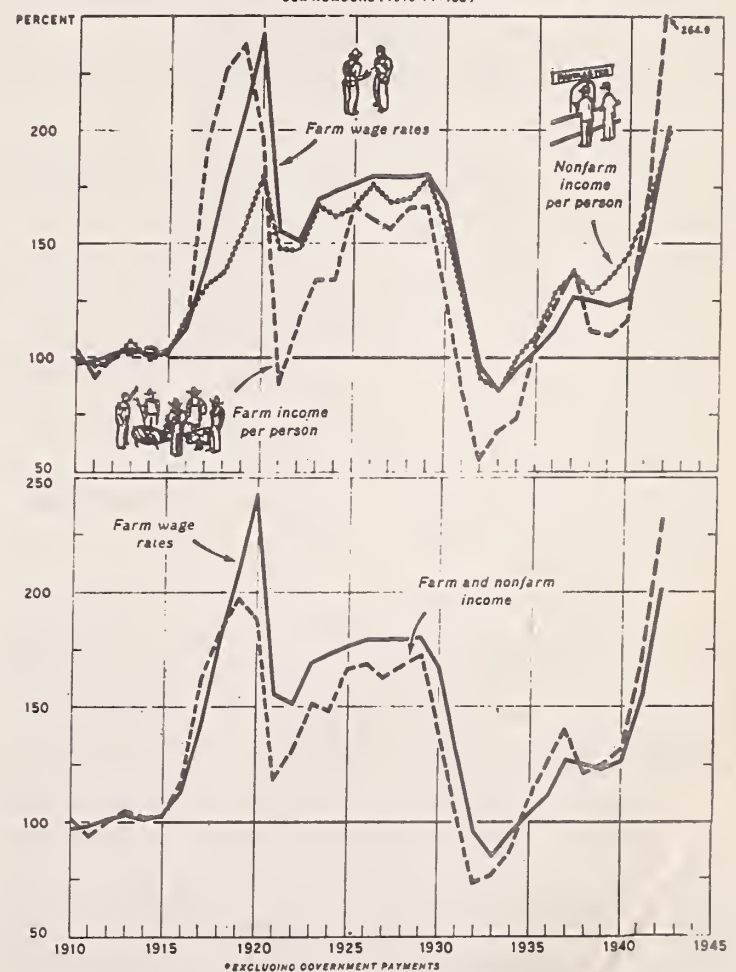
The dark area of the upper part shows how the number of people with jobs changes with the degree of business activity (shown in the lower section). Employment and industrial activity are very closely related. To maintain the demand for farm products, farmers have a deep interest in all measures that increase industrial production and employment in the city.

The level of city employment is closely related not only to industrial activity, but also to the levels of farm income, farm wage rates and nonfarm income.

Farm Laborers Prosper When City Activity Is High

In bad times, surpluses of farm laborers shove farm wage rates down. In good times, the demand for labor pushes upward the wages of farm labor, as well as of city labor. The upper section of figure 9 shows how farm wage

FARM WAGE RATES, AND FARM AND NONFARM INCOME PER CAPITA, UNITED STATES, 1910-42
(INDEX NUMBERS (1910-14 = 100))



U. S. DEPARTMENT OF AGRICULTURE

E.A.E. 39775

FIGURE 9

rates follow the movements of farm income per person and city income per person. This is shown even more clearly in the lower section, where per-capita farm and nonfarm incomes are averaged together (the dotted line) and contrasted with farm wage rates.

Farmers are most prosperous when business activity and city payrolls are high enough so that farmers sell their products for good prices and can afford to pay good wages. When farm labor is cheap, farm prices and farm income are low.

workers. Figure 10 shows how farm labor supplies go up when city activity goes down, and vice versa. When industrial employment is low, farm labor supplies are high.

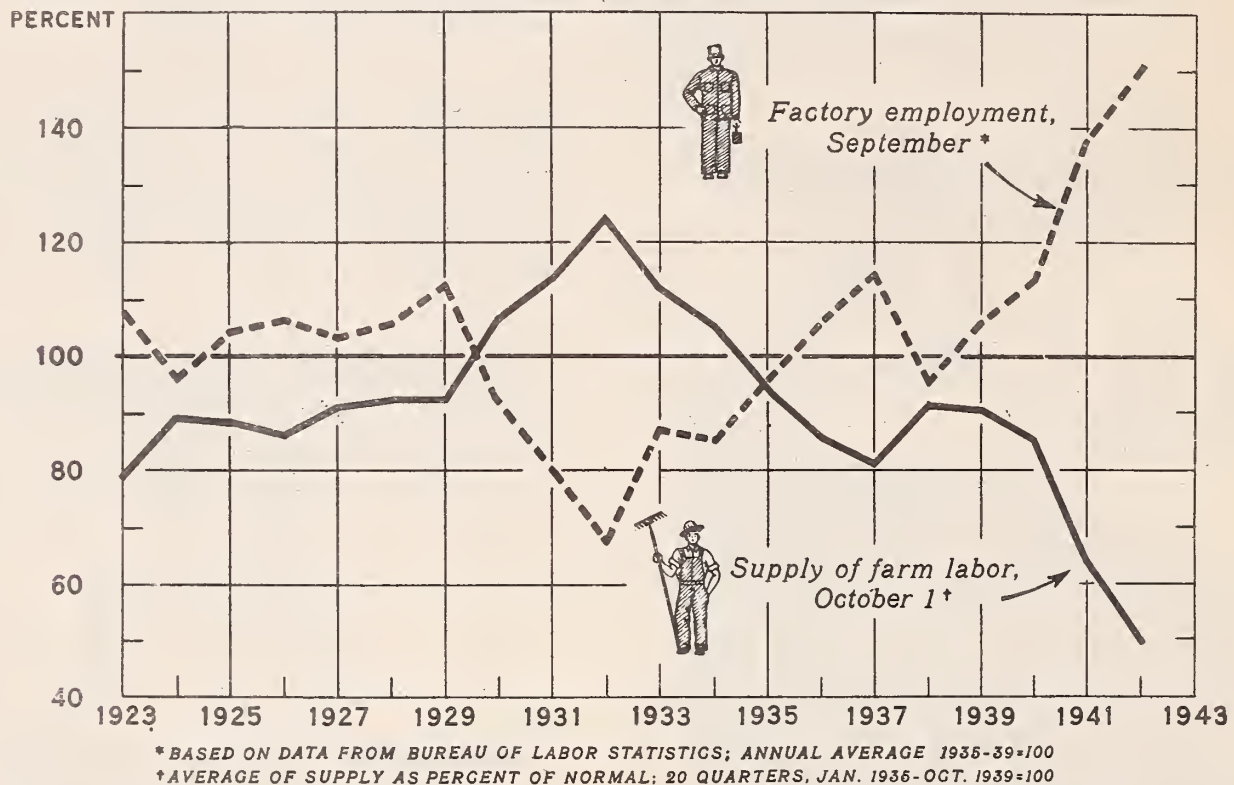
The problem of farm labor is especially important now, in connection with achieving wartime production goals in agriculture.

Farm Youth Can Find Careers When City Activity Is Great

Farms produce about twice as many boys and girls as can find a place to

SUPPLY OF FARM LABOR AND FACTORY EMPLOYMENT, UNITED STATES, 1923-42

INDEX NUMBERS (1935-39=100)



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FIGURE 10

NEG. 42739A BUREAU OF AGRICULTURAL ECONOMICS

Level of Business Activity Influences Size of Farm Labor Supply

The current shortage of farm labor is evidence of the fact that the amount of industrial employment available affects not only the demand for farm products, but also the supply of farm labor.

When jobs are scarce in the city, many men try to find work on farms. When activity in the city increases, labor is drawn off farms and farmers have to compete with city industry for

make a living on farms. When city business is good, the extra farm boys and girls go to the city for their careers. When business is bad, they stay on the farms where they are not really needed. In addition, unemployed city people move onto the land and make the surplus rural population even larger.

Figure 11 shows the large movement of farm boys and girls to the city, during the 1920's when business activity

was good and industries were demanding their services. It shows also that at the bottom of the depression in 1932 more people were moving back to the land than were able to leave it.

Cityward movement of people from farms has resumed since 1933, along with the gradual recovery of business. The yearly movement from farms during the late 1930's averaged about half as large as during the 1920's.

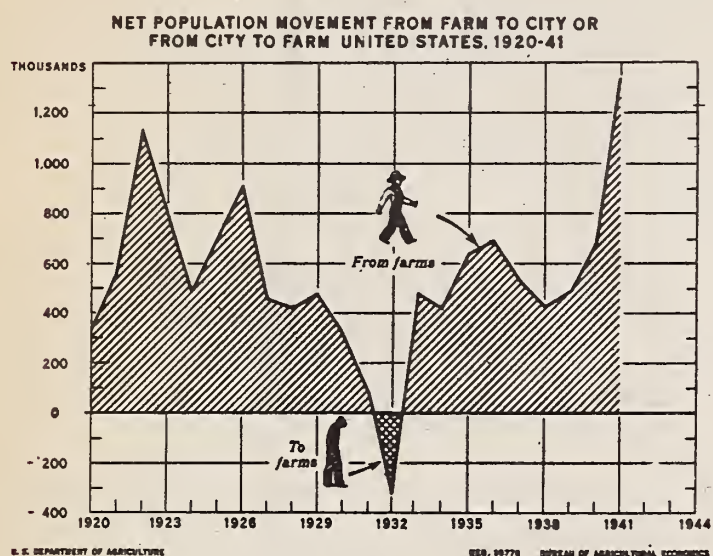


FIGURE 11

Under impetus of the war-time industrial program, factories are clamoring again for all the young folks they can get. When the record for the war years is added to figure 11, it will show a new peak like those of the 1920's. Whether the years after the war bring another slump like that of 1931-32 will depend upon whether the Nation succeeds in keeping industrial activity going after the war-time demands have passed.

Business Depression Affects Utilization of Farm Efficiency

Throughout our history farmers have increased their efficiency, just as have factory workers, and have been replacing human labor with machines. Because each farmer can till more acres and produce more farm products than formerly, proportionately more people can be spared for other kinds of work. The proportion of all the workers living

on the land has declined in decade after decade. From 1930 to 1940, however, lack of opportunities in the city checked this usual cityward movement, and kept more people on farms than ordinarily would have stayed there.

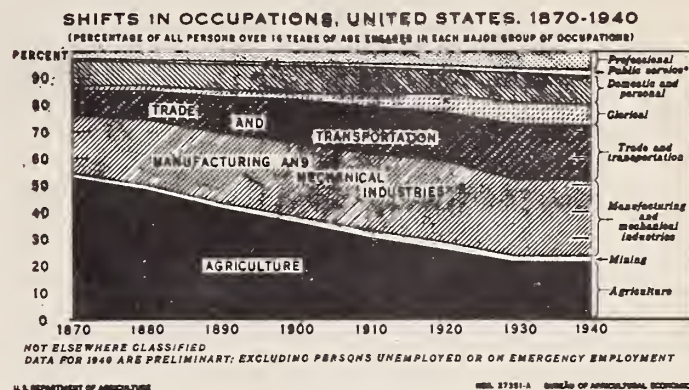


FIGURE 12

In the early days of this country, it took 9 families out of 10 to raise enough raw materials for food and clothing for all 10. Recently only 3 families out of 10 were needed on farms; the other 7 could run the factories and mines and railroads and stores to make all the other things our complex civilization provides.

If farmers should make full use of all recent improvements in farm machinery and crop and livestock production, 2 families out of 10 - or even less - could do all the necessary farm work. But unless city industry keeps going at high levels and makes real jobs for everyone not needed on farms, this increased farm efficiency would be of relatively little benefit. Society as a whole does not gain from economizing in the use of men on farms unless society is able to provide those men with useful work in other occupations.

Demand Influences Farm Prices More Than It Does Farm Output

The fourth city condition which affects demand for farm products is prices.

Prices and demand move together. Thus, if city people have full pay envelopes because all have jobs and the wheels of industry are whirling, then farm prices will be high.

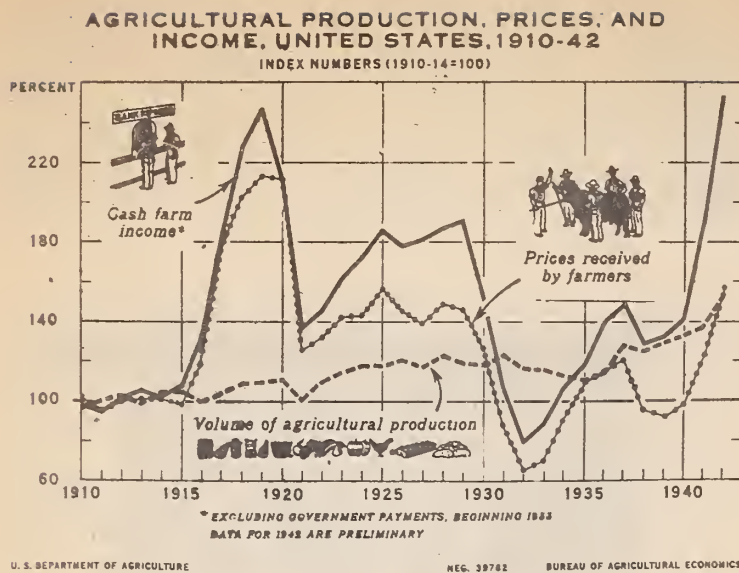


FIGURE 13

Farmers can change the aggregate amount of their production slowly—it takes time to breed and fatten more stock or grow more crops. Therefore, big changes in demand show up largely in farm prices. When demand for farm products goes up and down, farm prices follow. The broken line in figure 13 shows how the year to year changes in farm output are generally small, with a remarkably stable total amount produced.

The other two lines show how the changes in demand work themselves out largely in changes in farm prices, and

thus raise or lower farm income mainly through changes in prices per unit rather than by changes in number of units sold.

Conclusion

Farmers cannot be prosperous unless the people who buy their products are also prosperous. That includes their customers in the city, and in foreign countries.

If improved farm returns are to continue after the war is over, ways will have to be worked out by which all consumers of farm products can continue employed and can earn enough to buy the food and other things they need and want.

Ways will have to be found to keep industry producing as much for our needs in times of peace as we produce for destruction in time of war.

In studying their postwar problems, serious attention should be given to the industrial and foreign conditions which bear upon agriculture. The steps that may be needed to maintain prosperity among consumers of farm products, both here and in other countries, also will require careful thought and action.

May 1943